ATRIAL FIBRILLATION

First-line catheter ablation therapy—too much too soon?

Researchers from Denmark have conducted the first multicentre comparison between first-line catheter ablation and antiarrhythmic drug therapy for paroxysmal atrial fibrillation (AF). The findings, published in the *New England Journal of Medicine*, revealed no differences between the two treatment strategies in terms of reduction in AF burden over 2 years. The investigators assert that their data “support the current guidelines recommending antiarrhythmic drugs as first-line treatment in most patients with paroxysmal AF”

Catheter ablation is effective for the prevention of recurrent, drug-refractory AF. Theoretically, early ablation could avoid the necessity for long-term drug therapy, as well as the potential structural damage to the heart occurring with recurrent episodes of AF that are unresponsive to antiarrhythmic agents. Jens Cosedis Nielsen and colleagues tested this strategy in the multicentre, randomized MANTRA-PAF trial.

Drug-naïve patients, aged <70 years with paroxysmal AF were randomly assigned to receive percutaneous transvenous

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radiofrequency catheter ablation ($n = 146$) or antiarrhythmic agents ($n = 148$). The goal of ablation was to eliminate all high-frequency electrical activity >0.2 mV in the area of the pulmonary veins. However, because the trial was conducted between 2005 and 2009, this ablation strategy differed from the current gold-standard of total pulmonary vein isolation. In the drug-therapy group, patients were given the class IC agents flecainide or propafenone, or the class III drugs amiodarone or sotalol if class IC drugs were contraindicated. Among patients randomly assigned to drug therapy, 36% ultimately underwent ablation.

The burden of AF was significantly reduced in both groups during follow-up, with no differences between the two treatments at 3, 6, 12, or 18 months. At 24 months, however, the burden was significantly lower in patients who had

undergone ablation. This group also had greater freedom from any AF and symptomatic AF at 24 months. The investigators suggest that the efficacy of ablation might be more durable than that of drug therapy. Notably, one patient in the ablation group died as a result of procedure-related stroke, and three experienced cardiac tamponade.

“The study will be criticized by ablation advocates for inadequate power. While the primary end point outcome was negative, some important secondary end points like quality of life favoured ablation. For the moment, the application of the study results will be controversial,” comments Professor Stanley Nattel from the University of Montreal, Canada, who was not involved in the trial. “My own bias is to present a balanced perspective to the patient and let him or her decide,” he concludes.

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